European Commission - Questions and answers

# Questions and Answers - Emissions Trading – Putting a Price on carbon *

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**1. What is the EU Emissions Trading System?**

The EU Emissions Trading System (ETS) works on the principle of 'cap-and-trade'. It sets an absolute limit or 'cap' on the total amount of certain greenhouse gases that can be emitted each year by the entities covered by the system. This cap is reduced over time so that total emissions fall.

Since the EU ETS was introduced in 2005, emissions have been cut by 42.8% in the main sectors covered: power and heat generation and energy-intensive industrial installations. As a market-based system, the ETS ensures that emission reductions take place where it is cheapest to do so. As a result, most emission reductions until now have taken place in the power sector.

Under the EU ETS, regulated entities buy or receive emissions allowances, which they can trade with one another as needed. At the end of each year, regulated entities must surrender enough allowances to cover all of their emissions. If a regulated entity reduces its emissions, it can keep the "saved" allowances to cover its future needs or sell them to another installation that is short of allowances. A Market Stability Reserve, in place since 2019, stabilises the market by removing surplus allowances from it.

The sectors covered by the existing EU ETS include power and heat generation, energy-intensive industrial sectors and aviation within Europe. The Commission has today proposed to apply emissions trading in other sectors through a separate new system, to build on the positive results of the current system, and to incentivise the transition to cleaner road transport and heating fuels through a carbon price.

**2. What reforms are you proposing to emissions trading?**

Today, the European Commission has presented a legislative proposal to revise the EU ETS in line with the EU's more ambitious target of achieving net emission reductions of at least 55% by 2030, compared to 1990 levels. The sectors currently covered by the EU ETS account for around 41% of the EU's total emissions, so their contribution is crucial to achieving the overall target.

The Commission is proposing that emissions from the current EU ETS sectors (including the extension to the maritime sector) be reduced by 61% by 2030, compared to 2005 levels. This represents an increase of 18 percentage points compared to the current -43% contribution from the system to the EU's climate target. To reach this target, the Commission proposes a steeper annual emissions reduction of 4.2% (instead of 2.2% per year under the current system), following a one-off reduction of the overall emissions cap by 117 million allowances ('re-basing'). The Commission also proposes to gradually remove free emissions allowances for the aviation sector, which is already covered by the EU ETS, and to move to full auctioning of allowances by 2027 to create a stronger price signal to drive emissions reduction.

The Commission also reviewed the Market Stability Reserve and proposes to strengthen it, enabling it to absorb the historical surplus of allowances more quickly and to ensure market stability, notably by maintaining the currently increased annual intake rate of allowances.

The Commission is also proposing to apply emissions trading in new sectors where sharper reductions are needed to reach the 2030 target. Under the proposal, emissions from maritime transport will be included in the existing EU ETS, while emissions from fuels used in road transport and building will be covered by a new, separate emissions trading system.

This new upstream system will regulate fuel suppliers rather than households and car drivers. It will become operational as of 2025, with a cap on emissions set from 2026, based on data collected under the Effort Sharing Regulation. During the first year, fuel suppliers will be required to hold a greenhouse gas emissions permit and to report their emissions for 2024 and 2025. The cap in the new ETS will be reduced annually to yield emissions reductions of 43% in 2030 compared to 2005. To address the social impacts arising from the fact that the fuel suppliers are likely to pass on some of their carbon costs to consumers buying road transport and heating fuels, the Commission has also presented a proposal for a Social Climate Fund (see below).

**3. How will you apply emissions trading to buildings and road transport?**

The overall EU target of at least -55% emissions by 2030, compared to 1990 levels, cannot be reached without significant emissions reductions in buildings and road transport. In order to support other building- and transport-related policy measures, the Commission is proposing a new EU-wide emissions trading system, which will put a price on emissions from the building and the road transport sectors.

This new emissions trading will also work on the 'cap and trade' principle to cut emissions in the most cost-effective way and shorten the pay-back time for energy saving investments in these sectors.

This separate upstream system will regulate fuel suppliers (rather than households and car drivers). The suppliers will be responsible for monitoring and reporting the quantity of fuels they place on the market and for surrendering emission allowances each calendar year depending on the carbon intensity of the fuels. This approach incentivises the fuel suppliers to decarbonise their product as this will reduce the cost of compliance with the emissions trading system.

The new system is designed to start in an orderly, smooth and efficient manner from 2026, while delivering a clear signal on ambition. A certain amount of allowances would be frontloaded. The Market Stability Reserve will also operate in these new sectors. A specific mechanism is also proposed to contain excessive increases in the carbon price. One year ahead of the introduction of carbon pricing for the buildings and road transport sectors, a Social Climate Fund will start operating to address the social challenges that vulnerable groups in society may face as a result of the new emissions trading system.

Carbon pricing in itself does not address all barriers to the deployment of low- and zero-emissions solutions in road transport and buildings. These sectors will still be covered by the Effort Sharing Regulation, which means national policies will continue to contribute to reducing emissions in these sectors. Strong regulatory measures on energy efficiency, renewables, ecodesign, energy performance of buildings, $CO_2$ emission standards for cars and charging infrastructure will also drive the shift towards greener transport and buildings.

**4. What measures will you take to support sectors and households impacted by the reforms?**

The reforms are accompanied by measures helping the regulated entities to meet the higher ambition. The Commission proposes to make more money available for innovative technologies and to modernise the energy system. To overcome the low-carbon innovation investment gap and to address distributional effects of emission trading, the Commission proposes to increase the size of the Modernisation Fund by 2.5% allowances from the total quantity. In addition, the Innovation Fund will be topped up, among other sources, from the auctioning of allowances that would otherwise be allocated for free to industry sectors covered by the Carbon Border Adjustment Mechanism. The Commission also proposes to further incentivise innovative low-carbon technologies through the free allocation rules.

The Commission further proposes to set up a new Social Climate Fund to address social impacts of the extension of emissions trading to road transport and buildings on vulnerable households, micro-enterprises and transport users. The fund should provide funding to Member States to grant temporary income support and to support measures and investments intended to reduce reliance on fossil fuels through increased energy efficiency of buildings, decarbonisation of heating and cooling of buildings, including the integration of energy from renewable sources, and granting improved access to zero- and low-emission mobility and transport.

The Social Climate Fund would be financed by the EU budget, using an amount equivalent to 25% of the expected revenues of emissions trading for building and road transport fuels. It will provide €72.2 billion of funding to Member States, for the period 2025-2032, based on a targeted amendment to the multiannual financial framework. With a proposal to draw on matching Member State funding, the Fund would mobilise €144.4 billion for a socially fair transition. Member States should use their auction revenues from the emissions trading for building and road transport fuels to finance parts of their national contributions to the Fund.

**5. How does the proposal change the rules on aviation under the EU ETS?**

Significant emissions reductions in the aviation sector are needed to reach our 2030 climate targets. Despite flights within the European Economic Area (EEA) being covered by the EU ETS since 2012, aviation emissions in Europe increased an average of 5% year-on-year between 2013 and 2018. While there has been a recent reduction in air traffic as a consequence of the COVID-19 pandemic, aviation emissions are still projected to grow further. The Commission is proposing to revise the ETS aviation rules to create an effective price signal and ensure that the sector contributes its fair share. Flights within the European Economic Area (EEA), as well as flights to Switzerland and the UK, will continue to be covered by the EU ETS. The total number of aviation allowances in the ETS will be capped at current levels, and be reduced annually by 4.2% (linear reduction factor). The number of free allowances allocated to aircraft operators will be reduced progressively, with the aim of stopping free allocation to aviation by the end of 2026.

In parallel, the proposal implements the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for extra-European flights. The EU ETS Directive will apply CORSIA to EU-based airlines' emissions from flights to and from countries outside the EEA. When emissions from flights outside the EEA reach levels above 2019 they will have to be offset with corresponding carbon credits. These credits should contribute to achieving emissions reductions in various sectors of the economy, such as renewable energy or waste management in countries that participate in the Paris Agreement and from 2027 in CORSIA. Offset credits must be reliably accounted for to avoid them being counted twice. Each offset credit should represent a tonne of $CO_2$ that has been reduced or avoided.

**6. How will maritime transport be included in the revised EU ETS?**

To ensure that the maritime transport sector contributes to the EU's climate ambitions, the Commission is proposing to extend the scope of the EU's Emissions Trading System to cover $CO_2$ emissions from large ships (above 5000 gross tonnage), regardless of the flag they fly. The extension will include all emissions from ships calling at an EU port for voyages within the EU (intra-EU) as well as 50% of the emissions from voyages starting or ending outside of the EU (extra-EU voyages), and emissions that occur when ships are at berth in EU ports.

Under the proposal, the EU ETS would cover around two thirds of maritime transport emissions (90 million tonnes $CO_2$) and result in a price signal that incentivises improvements in energy efficiency and low-carbon solutions and reduces the price difference between alternative fuels and traditional maritime fuels. The proposal builds on the provisions in place for other EU ETS sectors as well as the existing EU Monitoring, Reporting and Verification System for shipping, which tracks $CO_2$ emissions from ships calling at all EU ports. In the FuelEU Maritime proposal, also presented today, the Commission proposes to increase the uptake of alternative, low-carbon fuels in maritime to help drive down emissions faster.

In practice, shipping companies will have to purchase and surrender ETS emission allowances for each tonne of reported $CO_2$ emissions. For the administration of the system, shipping companies will be attributed to an administering authority of a Member State that will ensure compliance using the same rules as for the other sectors. In addition to the EU ETS rules on penalties, ships can be denied entry to EU ports where the responsible shipping company has failed to surrender the necessary allowances for two or more consecutive years.

To ensure a smooth transition, shipping companies will only have to surrender allowances for a portion of their emissions during an initial phase-in period, reaching 100% after 3 years. A reporting and review clause is included to monitor the implementation of the rules applicable to the maritime sector and to take account of relevant developments at the level of the International Maritime Organization (IMO).

**7. How are the revenues from emissions trading used?**

Auction revenues from the existing ETS go mainly to Member States' budgets, and are used predominantly to tackle climate change. Under the existing EU ETS, Member States are required to spend at least half of their auction revenues to support greenhouse gas emissions reductions, to deploy renewables and carbon capture and storage, and to improve energy efficiency and district heating. Rising carbon prices in the existing EU ETS since 2018 have brought about an increase in the auction revenues available to spend on climate action. In 2018-2020, revenues amounted to €14-16 billion annually. On average, Member States spent 70% of these revenues for climate- and energy-related purposes.

Based on the Commission's proposal, Member States will be required to spend their auction revenues from emissions trading on climate- and energy-related projects, including decarbonisation in the road transport and buildings sectors. This includes investments in zero-emissions vehicles and mobility, energy efficiency improvements and renovations in buildings, as well as financial support in order to address social aspects. Furthermore, Member States should use a part of their revenues from emissions trading in the road transport and building sectors on measures to support vulnerable households and transport users and to match funding under the Social Climate Fund.

Under the existing EU ETS, a portion of allowances is auctioned for the Innovation Fund and the Modernisation Fund, which respectively support breakthrough innovations towards climate neutrality across the EU and power sector modernisation in lower-income Member States. The Commission proposes to increase both funds to help overcome the low-carbon innovation investment gap and to address distributional effects between Member States, specifically the proportionally greater challenge in meeting the EU's climate target in Member States that rely more on fossil fuels for power generation.

The Innovation Fund, currently sourced from 450 million allowances from the existing ETS in 2021-30, would be topped up with 50 million allowances and 150 million allowances from the new system covering emissions from road transport and buildings. In addition, allowances which would otherwise be allocated for free to industry sectors covered by the Carbon Border Adjustment Mechanism will now be auctioned and added to the Innovation Fund.

The Modernisation Fund, endowed with 2% of the total number of allowances for 2021-30 under the existing EU ETS, would be increased through the auctioning of an additional 2.5% of allowances. The top up would benefit Member States with GDP per capita below 65% of the EU average.

The Commission also proposes to set up a new Social Climate Fund to address social impacts of emissions trading in road transport and buildings sectors on vulnerable households, micro-enterprises and transport users. Resources from this Fund should correspond to approximately 25% of the expected auction revenues from the new system in 2026-2032. It should provide funding to Member States to support policies and measures that seek to alleviate and mitigate social impacts of extending emissions trading. This includes temporary income support and measures and investments intended to reduce reliance on fossil fuels by increasing the energy efficiency of buildings, decarbonising the heating and cooling of buildings - including the integration of energy from renewable sources - and granting improved access to zero- and low-emission mobility and transport.

### 8. Will there still be protection against carbon leakage through the granting of free allowances?

Free allowances will remain an important tool to protect energy-intensive industry against the risk of carbon leakage until at least 2030. However, with the reduction of the overall emissions cap, the number of free allowances will also be reduced. The Commission proposes that these reductions occur only in the second half of the decade.

The proposal does not change the basic rules for calculating the free allocation received by installations under the EU ETS. Free allocation will continue to be based on benchmarks representing the level of performance of the best installations. With its review of the carbon leakage framework, the Commission aims to allocate free allowances in a more targeted way and to incentives the uptake of low-carbon technologies. The maximum annual reduction rate of the benchmark values will increase from 2026 onwards, shifting more free allocation to sectors that are harder to decarbonise.

The scope of the ETS is broadened so that installations using low-carbon or zero-carbon technologies may in the future benefit from continued free allocation. Moreover, free allocation will be made conditional on decarbonisation efforts: installations not implementing cost-efficient measures as recommended in energy audits will have their free allowances reduced by up to 25%.

Finally, the Commission has put forward a proposal for a Carbon Border Adjustment Mechanism (CBAM), which addresses the risk of carbon leakage for a targeted number of sectors, by pricing the carbon content of products imported to the EU. If importers can prove, based on verified information from third-country producers, that a carbon price has already been paid during the production of the imported goods, the corresponding amount can be deducted. It is an environmental policy measure that ensures that the EU's climate ambition is not undermined because of less ambitious climate policies adopted in other parts of the world. The CBAM is an alternative to free allocation, and as such the two measures should not overlap. To ensure a smooth transition from one system to the other, free allocation under the EU ETS will be gradually phased out as the Carbon Border Adjustment Mechanism is phased in for these sectors.

### 9. How will the revision ensure stability in the carbon market?

The EU ETS is a market-based mechanism, which means that the carbon price is determined by supply and demand of allowances. The cap on emissions ensures that the environmental objectives are reached, and tradability of allowances ensures that these reductions are achieved in a cost-efficient way.

In response to a considerable surplus of allowances on the EU's carbon market, with corresponding effects on the price signal, the Market Stability Reserve started operating from 2019. As part of the first review of the Market Stability Reserve this year, the Commission is now proposing a small number of changes to the rules for the operation of the reserve. The Market Stability Reserve is a fully rules-based mechanism, and does not allow the Commission to intervene in the market at its discretion. Instead, it automatically places allowances in the reserve or releases them in case pre-defined thresholds are crossed. The legislative proposal contains an amendment enabling a smoother placing of allowances in the reserve the closer the surplus on the market is to the relevant threshold.

The Commission also proposes that the Market Stability Reserve operates in the new emissions trading system for road transport and heating fuels, with specific rules. Additional measures are also proposed to mitigate a potential risk of excessive price increases in the new system through a release of allowances from the reserve under certain conditions.

**For more information**

IP - Legislative Proposals to transform the Economy and Society to meet our Climate Targets

Delivering the European Green Deal – dedicated webpage (including legislative proposals)

Delivering the European Green Deal – videos and photos

More information on Climate Action proposals

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